

AGRICULTURAL LAND CLASSIFICATION  
HARROGATE LOCAL PLAN  
SITE 8, HIGHFIELD HOUSE FARM  
KNARESBOROUGH  
MARCH 1993

ADAS  
Leeds Statutory Group

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MAFF Ref:-

site8.doc.mp

## SUMMARY

An Agricultural Land Classification Survey of approximately 57ha of land at Highfield, Knaresborough was carried out in three stages between October 1986 and February 1993. Most of this is in agricultural use.

Grade 2 land covers 10.5ha. Soils consist of medium sandy loam topsoils over loamy medium sand and sandy clay loam subsoils. Profiles are well or imperfectly drained and limited to Grade 2 by summer droughtiness and slight winter wetness.

Subgrade 3a land covers 22.8ha and consists of medium clay loam topsoils over medium clay loam and sandy clay loam subsoils. Profiles are imperfectly drained and limited to Subgrade 3a by soil wetness.

Subgrade 3b land covers 11.5ha and consists of medium clay loam topsoils over slowly permeable medium clay loam or sandy clay loam subsoils. Profiles are poorly drained and limited to Subgrade 3b by soil wetness.

Grade 4 land covers 0.7 hectares. Soil profiles are poorly drained and limited to Grade 4 by severe soil wetness.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT: HARROGATE LOCAL PLAN, SITE 8, HIGHFIELD HOUSE FARM, KNARESBOROUGH

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and survey Methods

The site is located at Grid Reference SE 370572 approximately 2Km east of Knaresborough between the A59 York Road and the York/Harrogate Railway. It covers a total of 57.1ha of which 55.5ha are currently in agricultural use. The western and eastern parts of the site were surveyed in 1986 and 1987 respectively for Local Plan and ad hoc development purposes. The central area was surveyed in February 1993. In all three surveys soils were examined by hand auger borings at 100m intervals at points predetermined by the National Grid. Land quality of the central section of the site between Hay-a-Park Lane and Highfield Farm was assessed using methods described in Agricultural Land Classification of England and Wales (MAFF 1988). The remaining areas were originally classified according to methods described in MAFF Technical Report 11/1 (1976). The distribution of grades and subgrades in the attached map, takes into account revisions in ALC grading criteria, notably the inclusion within Subgrade 3b of land previously designated Subgrade 3c.

1.2 Land Use and Relief

The site is currently in mixed arable and grassland use, the majority of the site being under arable crops. At present there are grass leys adjoining the railway line east of the drain and in the south west, with permanent pasture in the south eastern corner of the site.

The altitude range is between 39 and 43 metres and the land is very gently sloping except in the south east immediately adjacent to the stream. Here localised steep slopes limit agricultural operations, although slope in general is not a limitation to grade.

### 1.3 Climate

Grid Reference	: SE 370572
Altitude (m)	: 40
Accumulated Temperature above 0°C (January-June)	: 1360 day°C
Average Annual Rainfall (mm)	: 677
Climatic Grade	: 1
Field Capacity Days	: 167
Moisture Deficit (mm) Wheat	: 100
Moisture Deficit (mm) Potatoes	: 90

### 1.4 Geology, Soils and Drainage

Northern and eastern parts of the site are covered by boulder clay (glacial till) of variable depth. Coarse loamy, occasionally gravelly river terrace deposits form the parent material in the south western section of the site.

Soils formed on clay are heavy textured and imperfectly and poorly drained (Wetness Classes III and IV) with slowly permeable subsoils within 30 to 60 cm of the surface. They are similar to soils within the Duskeswick Association as mapped by the Soil Survey and Land Research Centre. Soils formed on river terrace deposits are medium textured and are well drained.

## 2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:-

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2	20.5	35.9
3a	22.8	39.9
3b	11.5	20.2
4	0.7	1.2
5		
(Sub total)	(55.5)	(97.2)
Urban	0.5	0.9
Non Agricultural	0.8	1.4
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.3	0.5
Open Water		
Land not surveyed		
(Sub total)	(1.6)	(2.8)
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TOTAL	57.1	100
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## 2.1 Grade 2

Land in this grade occurs in three areas. It is widespread in the central and western section of the site, with a smaller area in the south west adjacent to the A59, and in the east towards the southern boundary. There is also a small area adjoining the railway in the north east.

Soils consist of very slightly stony medium sandy loam topsoils overlying loamy medium sand or gleyed sandy clay loam subsoils. Soils with loamy medium sand subsoils are well drained and droughtiness is the main limiting factor. Soils with sandy clay loam subsoils are imperfectly drained (Wetness Class III), being slowly permeable below 45 cm, and limited to Grade 2 by slight soil wetness.

## 2.2 Subgrade 3a

Much of the agricultural land falls within this subgrade. Soil profiles consist of very slightly stony medium clay loam topsoils overlying very slightly stony gleyed clay loam subsoils. Soils are imperfectly drained (Wetness Class III) being slowly permeable below 45cm. Soil wetness is the main limiting factor.

## 2.3 Subgrade 3b

Land in this subgrade occurs in the north and around the stream in the south east. Very slightly stony medium clay loam topsoils overlie very slightly stony gleyed clay loam subsoils. These soils are poorly drained (Wetness Class IV), being slowly permeable within 45cm. Soil wetness and workability problems are the *main limiting factor*.

## 2.4 Grade 4

This land follows a small drainage line flowing in a south westerly direction in the southern part of the site. This area is very wet and is waterlogged below 20cm for much of the year.

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MAP